

## **Neonatal Stage (0–2 Weeks)**

### **I. Overview of the Neonatal Period**

- The full neonatal period lasts about 4 weeks
- Commonly divided into two-week intervals due to rapid developmental changes
- Immediate post-birth evaluation is critical

### **II. Initial Health Checks at Birth**

- Check for congenital defects:
- Cleft palate
- Signs of prematurity (e.g., lack of hair on tops of feet)
- Monitor daily weight gain
- Poor weight gain may indicate:
- Inadequate milk production
- Illness or infection
- Low birth weight increases risk of:
- Sepsis
- Hypoglycemia
- Higher mortality

### III. **Umbilical Cord Care**

- Umbilicus should:
- Dry and fall off within ~3 days
- Inspect daily for:
- Redness
- Swelling
- Discharge
- Umbilical infections are a common source of sepsis
- Veterinarian exams include:
- Umbilicus assessment
- Check for umbilical or inguinal hernias

### IV. **Temperature Regulation**

- Neonates cannot regulate body temperature independently
- Depend on:
- Mother
- Littermates
- Limited insulation due to lack of body fat

- Normal rectal temperatures:
- Week 1: 95–99°F
- Week 2: 97–100°F
- Neonates can only raise body temperature about 12°F above room temperature

#### Hypothermia Risks

- Reduced feeding
- Hypoglycemia
- Death if untreated
- Neonates:
- Cannot shiver
- Lack peripheral vasoconstriction
- These abilities develop during the first week of life

#### V. Gastrointestinal Development & Stool Characteristics

- GI tract is sterile at birth
- Bacterial colonization occurs shortly after
- Meconium passed in first 48 hours:
- Soft
- Yellow/brown
- Normal stool:

- Pasty
- Yellow or tan

#### Abnormal Stool Indicators

- Green or yellow watery stool → Overfeeding
- White stool → Possible lactose intolerance
- Foamy yellow stool → Possible canine herpesvirus
- Blood-tinged stool → Possible sepsis or coccidiosis

#### VI. **Nutrition, Glucose, and Hydration**

- Puppies can maintain blood glucose for ~24 hours without eating
- After 24 hours:
  - Severe glucose decline
  - Risk of hypoglycemia
- Dehydration risk is high:
  - Neonates are <80% water
  - Kidney development:
    - Kidneys immature for first 2 weeks
  - Unable to concentrate urine
- Urinate 2–3× more often than adult dogs

## VII. **Cardiovascular & Respiratory Function**

- Blood pressure: lower than adults
- Heart rate:
- Normal ~200 beats per minute
- Respiratory rate:
- At birth: 10–18 breaths/minute
- After day 1: ~30 breaths/minute

## VIII. **Motor Development**

- Day 5–6:
- Able to support weight on front legs
- Day 14–16:
- Begin supporting weight on hind legs

## IX. **Behavior & Reflexes**

- Sleep approximately 90% of the day
- Sleep type: Activated sleep

- Helps strengthen muscles for standing
- Present reflexes:
- Righting reflex
- Withdrawal from stimuli
- Anal and urinary reflexes
- Suckling and rooting reflexes
- Seen as head bobbing or nudging

## X. **Feeding & Nutrition**

### Importance of Mother's Milk

- Provides:
- Immunity
- Protection against harmful bacteria
- Support for healthy gut bacteria
- Hormones and energy

### Colostrum

- First milk produced by mother
- Thick and sticky
- Provides ~95% of immunity in first 24 hours

- Milk transitions over first week to mature milk

#### Feeding Frequency

- First week:
- 8–10 nursing sessions/day
- After week one:
- Frequency gradually decreases

### **XI. Nursing Challenges & Management**

- Possible issues:
- Rejected puppies
- Orphaned puppies
- Weak or small puppies
- First step:
- Rule out cleft palate
- Small or weak puppies:
- May struggle with thick colostrum
- May require bottle feeding

#### Maternal Issues

- Rejection

- Illness
- Insufficient milk production
- Best alternatives:
- Foster mom with similarly aged puppies
- Commercial or homemade puppy milk replacer

## **XII. Immunity Support**

- Puppies receive immunity if:
- Mom is fully vaccinated
- Colostrum consumed within first 16 hours
- If colostrum not received:
- Sterile serum from a fully vaccinated dog may be injected

## **XIII. Feeding Management in Litters**

- Stronger puppies may displace weaker ones
- Signs of inadequate intake:
- Restlessness
- Excessive vocalization
- Distended abdomen



- Strategies:
- Allow smaller puppies to nurse first
- Supplement milk if maternal supply is insufficient

#### XIV. **Milk Replacer Guidelines**

- Use puppy-specific milk replacers only
- Underfeeding is safer than overfeeding
- Overfeeding can cause diarrhea and dehydration
- Cow or goat milk:
- Not recommended
- Nutritionally inappropriate
- Always consult a veterinarian for:
- Feeding amounts
- Feeding schedule

#### XV. **Common Health Concerns**

- Increased risk in puppies with:
- Nursing difficulties
- Physical defects

- Potential issues:
- Hypothermia
- Dehydration
- Sepsis
- GI infections
- Puppies without colostrum or immune support are at higher risk for:
- Bacterial infections
- Viral diseases (especially if mom is unvaccinated)

### **Neonatal Puppy Checklist for Breeders (0–2 Weeks)**

#### **I. At Birth (First 24 Hours)**

- ☐ Immediate Puppy Assessment
- ☐ Puppy breathing and responsive
- ☐ No visible defects (cleft palate, limb deformities)
- ☐ Hair present on feet (check for prematurity)
- ☐ Record birth weight
- ☐ Identify puppy (collar, mark, or record)

☐ Umbilical Care

- ☐ Umbilical cord intact and clean
- ☐ Cord dries and shrivels
- ☐ No redness, swelling, or discharge

☐ Temperature & Environment

- ☐ Whelping area warm and draft-free
- ☐ Puppy warm to the touch (not cool)
- ☐ Rectal temperature 95–99°F
- ☐ Puppy dried and placed with mom/littermates

☐ Colostrum Intake

- ☐ Puppy nurses within 2–4 hours of birth
- ☐ Strong suckle reflex observed
- ☐ All puppies have access to nipples
- ☐ Note any puppies that struggle to latch

II. **Daily Checklist (Days 1–14)**

#### ☐ Weight & Growth

- ☐ Weigh each puppy daily (same time each day)
- ☐ Weight increasing steadily
- ☐ Flag puppies with weight loss or no gain

#### ☐ Feeding

- ☐ Nursing 8–10 times per day (week 1)
- ☐ Belly rounded but not distended
- ☐ No excessive crying after feeding
- ☐ Smaller puppies allowed to nurse first if needed
- ☐ Supplement only if medically indicated

#### ☐ Hydration

- ☐ Gums moist and pink
- ☐ Skin snaps back quickly when gently pinched
- ☐ Urination occurring multiple times daily

### III. **Temperature Monitoring**

#### ☐ Body Temperature

- ☐ Week 1: 95–99°F
- ☐ Week 2: 97–100°F
- ☐ Puppy never cold or lethargic

#### ☐ Hypothermia Watch

- ☐ Weak suckle
- ☐ Decreased movement
- ☐ Crying or silent and limp
- ☐ Warm gradually if cold (never feed a cold puppy)

### **IV. Stool & Elimination**

#### ☐ Normal Elimination

- ☐ Meconium passed in first 48 hours
- ☐ Stool yellow/tan and pasty
- ☐ Dam stimulating urination/defecation or breeder assisting

#### ☐ Abnormal Stool Warning Signs

- ☐ Watery green/yellow (overfeeding)
- ☐ White stool (possible lactose intolerance)

- ☐ Foamy yellow stool (possible herpesvirus)
- ☐ Blood-tinged stool (possible sepsis/coccidia)

#### V. **Umbilicus & Abdomen (Daily Check)**

##### ☐ Umbilical Site

- ☐ Dry and detached by day 3
- ☐ No swelling, heat, or discharge

##### ☐ Abdomen

- ☐ Soft, not bloated
- ☐ No umbilical or inguinal hernias felt

#### VI. **Behavior & Activity**

##### ☐ Normal Behavior

- ☐ Sleeping ~90% of the time
- ☐ Rooting and suckling reflex present

- ☐ Righting reflex present

#### ☐ Developmental Milestones

- ☐ Day 5–6: supports on front legs
- ☐ Day 14–16: begins hind leg support

### VII. **Cardiovascular & Respiratory**

#### ☐ Heart & Breathing

- ☐ Heart rate ~200 bpm
- ☐ Breathing smooth and regular
- ☐ Respiratory rate ~30 breaths/min after day 1
- ☐ No gasping or labored breathing

### VIII. **Nursing Problems & Intervention**

#### ☐ Watch For

- ☐ Weak or fading puppies

- ☐ Constant crying
- ☐ Being pushed away from nipples
- ☐ Poor weight gain

#### ☐ Action Steps

- ☐ Check for cleft palate
- ☐ Ensure body temperature is normal
- ☐ Assist with nursing or bottle feed colostrum
- ☐ Consider foster dam if available
- ☐ Start puppy milk replacer if needed
- ☐ Contact veterinarian if no improvement within hours

### **IX. Immunity & Health Protection**

#### ☐ Immunity Confirmation

- ☐ Dam fully vaccinated
- ☐ Colostrum consumed within first 16 hours

#### ☐ If No Colostrum

- ☐ Discuss serum transfer with veterinarian



- ☐ Monitor closely for GI signs or lethargy

#### **X. Red Flags – Call the Vet Immediately**

- ☐ No nursing for 12–24 hours
- ☐ Weight loss over 24 hours
- ☐ Cold body temperature
- ☐ Persistent diarrhea
- ☐ Blood in stool
- ☐ Weak cry or limp body
- ☐ Swollen or infected umbilicus
- ☐ Labored breathing

#### **XI. Supplies to Keep Ready**

- ☐ Digital gram scale
- ☐ Rectal thermometer
- ☐ Heating source (safe, regulated)
- ☐ Puppy milk replacer
- ☐ Bottles and/or feeding tube (if trained)

- ☐ Clean towels
- ☐ Disinfectant for umbilical care
- ☐ Veterinarian contact info